

**Work Order ID 59945**

June 17, 2010 3:21:06 PM

Item ID: D3628-1

Accept



Setup Start



Page 2

**Work Order ID 59945**

June 17, 2010 3:21:06 PM

Item ID: D3628-1

Accept



Setup Start



Page 1

Revision ID:

Item Name: Cupped Washer

483458

Start Date: 6/17/10 Start Qty: 500.00



Cust Item ID:

Required Date: 7/02/10 Req'd Qty: 500.00



Customer:

Reference:

Approvals:	Process Plan:	CL	Date: 10/16/17	Tooling:	Date:
	QC:		Date:	SPC (Y/N):	Date:

Run	Start	
	Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D3628	Rev B								

100		0.00							
-----	--	------	--	--	--	--	--	--	--

	PURCHASING								
--	------------	--	--	--	--	--	--	--	--

Purchasing	Memo	0.00							
------------	------	------	--	--	--	--	--	--	--

Purchasing	Issue P/O:	12112							
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	Email or Ship DXF file to vendor								
--	----------------------------------	--	--	--	--	--	--	--	--

	Laser Cut D3628-1 flat pattern and form as per Dwg D3628								
--	--	--	--	--	--	--	--	--	--

	Possible Supplier: GFI								
--	------------------------	--	--	--	--	--	--	--	--

	Material release note is required								
--	-----------------------------------	--	--	--	--	--	--	--	--

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
-----	--	------	--	--	--	--	--	--	--

	Memo	0.00							
--	------	------	--	--	--	--	--	--	--

Packaging	Ensure material certification is attached								
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Packaging									
-----------	--	--	--	--	--	--	--	--	--

483458  
CL 10/16/18 500

100/7/20 458

## Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

## Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

**Picklist Print**

June 17, 2010 3:21:05 PM

Page 1

Work Order ID: 59945

Parent Item: D3628-1

Parent Item Name: Cupped Washer



Start Date: 6/17/10

Start Qty: 500.00

458

Required Date: 7/02/10

Required Qty: 500.00

Comments: IPP Rev:A New Issue 07-05-28 JLM  
IPP Rev:B Removed Powder 07-07-11 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3628-1P 	CUPPED WAHSER	Purchased	No		110		Each	0.0000	1	500		6/17/20 453	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

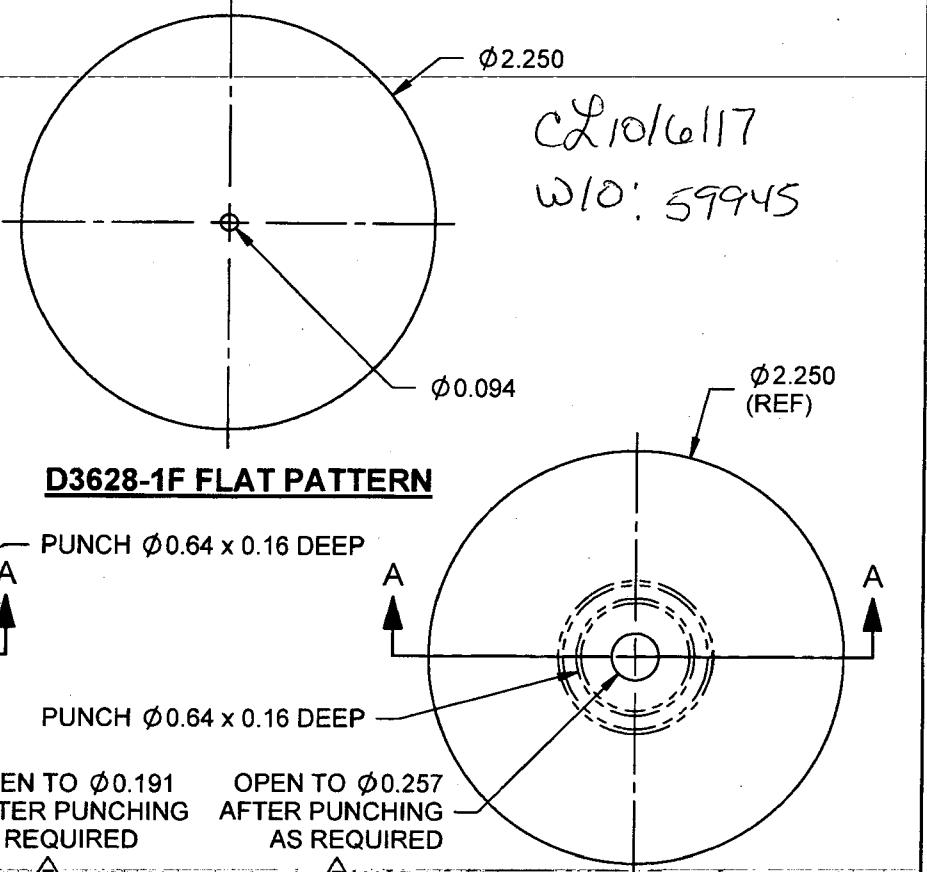
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date &amp; initial all entries

**DART**

DESIGN <i>CB</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>CE</i>	APPROVED <i>CH</i>	DRAWING NO. D3628	REV. B	SHEET 1 OF 1
DATE 07.07.09		TITLE CUPPED WASHER	SCALE 1:1	
REV A	DATE 07.06.08	DESCRIPTION NEW ISSUE		
REV B	DATE 07.07.09	DESCRIPTION REMOVE POWDER COAT		

RELEASED

07.07.09 *CH***D3628-1 CUPPED WASHER**  
(MAKE FROM D3628-1F)**D3628-3 CUPPED WASHER**  
(MAKE FROM D3628-1F)

## NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK) PER MIL-S-5019  
(REF DART SPEC M304S18GA)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
- 6) IDENTIFY WITH DART P/N "D3628-1/-3" USING FINE POINT PERMANENT INK MARKER ON THE  
UNDERSIDE OF THE PART AS INDICATED
- 7) WHEN DRILLING OUT THE CENTRE HOLE AFTER PUNCHING, ENSURE THAT THE HOLE IS DRILLED  
CONCENTRIC TO THE CUPPED AREA, WITHIN 0.03

*100*

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED  
2B FINISH

SPECIFICATION: MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

PART NUMBER: M304S TT GA  
GA

WHERE "TT" = GAUGE THICKNESS

EG. 16 GAUGE SS SHEET = M304S16GA

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176

REFERENCE ONLY

RELEASED  
09/08/23 MHD

B	REFORMAT DWG, ADD ASTM/ASME SPECS (ZN D8-1), ADD GAUGE REF (C8-1), REF PAR 08-020A	CP	09.06.01
A	NEW ISSUE	DS	01.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>ST</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>PP</i>		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.	<i>PP</i>	M304S	SHEET 1 OF 1
APPROVED	<i>PP</i>	TITLE	SCALE
DE APPR.	<i>PP</i>	304/316 SS SHEET	NTS
DATE	09.06.01	COPRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS RESTRICTED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED, IN WHOLE OR IN PART, BY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO12112

Purchase Order Date 6/18/10

PO Print Date 7/20/10

Page Number 1 of 1

Order From : VC-GFI001

GFI  
180 AVENUE LABROSSE  
POINTE CLAIRE, QC H9R 1A1  
CA

Contact Name

Vendor Phone 514 630 4877

Vendor Fax 514 630 4849

Vendor Account Nbr

Buyer Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms Net 30

Currency CAD

FOB

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference	Description/	Req Date/	Req. Qty/	Ship Method	Unit Price	Extended
	Revision ID	Mfg ID	Taxable	Unit of Measure			Price
	Vendor Part Number						
1	D3628-1P	CUPPED WAHSER	7/20/10	4,58 Each	4,58 Purolator ground	\$2.4160	\$11.07

Special Inst: AS PER DWG D3628 REV. B  
B59945  
MATERIAL: 304/316 SHEET 18GA  
(.050" THICK)

PO Total: \$11.07



No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 4

Change Date: 7/20/10



<sup>1</sup>GFI est une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.



**BON DE LIVRAISON / SHIPPING MEMO**

DATE DE LIVRAISON / SHIPPING DATE				N° DE BON DE LIVRAISON SHIPPING MEMO NO.	PAGE
JR - DY	MO - MO	AN - YR			
19	07	10	0442108		1/1

<sup>1</sup>GFI est une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.

**VENDU À / SOLD TO**

**EXPÉDIÉ À / SHIP TO**

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON  
K6A 1K7

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON  
K6A 1K7

CODE DE CLIENT CUSTOMER CODE		N° DE CONTRAT JOB NO	VOTRE N° DE COMMANDE YOUR PURCHASE ORDER NO.	EXPÉDIÉ PAR SHIP VIA
DART	GFI-0299	0216528	PO12112	
QUANTITÉ QUANTITY		N° DE PIÈCE PART NO	DESCRIPTION	
458	D36281		CUPPED WASHER	CERTIFICATE OF CONFORMANCE REQ
<p style="text-align: center;"><i>S</i> <i>col07/22</i></p> <p>MFG. JOB# <u>J0216528</u> - QTY <u>458</u></p> <p style="text-align: center;">  </p>				

EXPÉDITEUR  
SHIPPER

N° DE BON DE LIVRAISON  
SHIPPING MEMO NO.

**RECIPIENT / RECEIVED BY**

DATE \_\_\_\_\_

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION.  
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS.





Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

# CERTIFICATE OF COMPLIANCE

## CERTIFICAT DE CONFORMITE

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

*D WPF/27*

CERTIFICATE NO. 5 OUR JOB NO. J0216528 SHIPPING MEMO 0442108

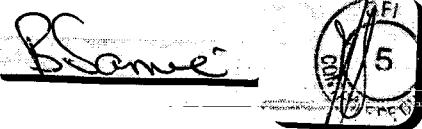
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
	458 PCS	PO12112	D36281	B	CUPPED WASHER	B
MATERIAL			SUPPLIED BY			MAT. REL. NO.
AMS 5513 304 ANN			TW METALS / NORTH AMERICAN			H/N # 6CH2

PROCESS	PROCESSOR	RELEASE NOTE #
1 FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	N/A
2 REF. GFI MANUFACTURING JOB NUMBER J0216528-001 (458 PCS)		
3		
4		
5		
6		
7		
8		
9		

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 19 JULY 2010

G.F.I. Q.C. REP.



DP12-001 REV 0 Bombardier Certificate of Compliance  
TW Metals District Procedure

Revision D

Revision Date: Dec 03 00

Superseding Date:

Page 1 of 1

## CERTIFICATE OF COMPLIANCE

## FRAUD AND FALSIFICATION STATEMENT

The following false, fictitious, or fraudulent statements or entries on this document may be considered to be a felony under Federal Statutes including Federal Law Title 18 Chapter 27.

## CERTIFICATE OF COMPLIANCE

This certificate of compliance certifies that the materials supplied on the purchase order do not contain any companies in our respects with the material description and procurement specification.

## MERCURY FREE STATEMENT

We certify that mercury, radium, or alpha bearing materials and/or equipment used in the manufacture, fabrication, assembly, or testing of any material supplied by TW Metals, Inc. Switches, glass thermometers, standard cell and other items containing the above elements may be used but may will be located so as not to constitute a contamination hazard.

CUSTOMER NAME GFFEPURCHASE ORDER NO 0076987ITEM NO 0001 SHIPPER INVOICE NO 03262608MATERIAL 304 S/S Sheet SPECIFICATION AMS 5513MANUFACTURERS MILL North American StainlessSIZE 1/8"HEAT/LOT NO LOCH 2PART NO TS050361204AQUANTITY 1.00TEST DEPARTMENT CLERK Amy Davis

## AUTHORITY

Joe Scnab  
Director of Quality Assurance

This document is maintained as a Controlled Document only in the TW Metals' Computer System. Once printed this document immediately becomes uncontrolled and is subject to change at any time and without notice.

Description: 304L ANN 04B-052 AME5116513  
 Customer: TW Metals Cincinnati  
 Shipped: 05/26/2010  
 Heat: 6CH2

UNITED PERFORMANCE METALS  
 This is to certify that in accordance with the records in  
 our files the material shipped on your purchase order  
 conforms to the following:  
 2475 Symmes Road Hamilton, OH 45015

Box: 36 x 120  
 P.O. EM14422  
 Part: M42230159  
 Sets #: 01146381  
 Quantity: 62

*Pam McAlpin*

**NAS** NORTH AMERICAN  
 STAINLESS

**METALLURGICAL TEST REPORT**

6870 Highway 42 East  
 Chest, KY 41045-9615  
 (502) 347-6000

Certificate: 524033 02 Mail To: UNITED PERFORMANCE METALS  
 Customer: 0010 001 1475 SYMMES ROAD  
 HAMILTON, OH 45015 Ship To: UNITED PERFORMANCE METALS  
 3475 SYMMES ROAD  
 HAMILTON, OH 45015 Date: 1/28/2010 Page: 1  
 Steel: 302/304/304L  
 Finish: 2B

Your Order: 01015254 NAS Order: AN 0433956 01 Corrosion: ASTM A262/02aB/180 Bend-OK

**PRODUCT DESCRIPTION:**

S/S COIL, C.R. ANNEALED & PICKLED; UNS 30400/30403/30200  
 ASTM A240/09b, A480/09, A666/03; ASME SA240/07, SA480/07, SA666/07  
 CHEM ONLY ON FOLLOWING ASTM: A276/08a, A479/08, A684/08, A312/08a  
 CHEM ONLY ON FOLLOWING ASME: SA312/07, SA479/07  
 AMS 5511H/5513H/5516P XMRK; MIL-5D59B ARD3 (CRN MEAS); MIL-4043B  
 NACE MR0175/01, MR0103/07; QQS766D-X X NAG PERM  
 MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED  
 FNI 304L/304/302; AMS 5511H

**REMARKS:**

Mat'l is Free of Mercury Contamination. No weld repairs.  
 EN 10294:2004 3.1; QQS763F Cond A; RoHS Compliant  
 Material is Free of Radioactive Contamination  
 NAS Steel Making Process: EAF, AOD, & Cont. Casting  
 Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001:2000  
 \*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Supplier Id	Thickness	Width	Weight	Length	Mark	Pieces	COMMODITY CODE
046CH2 A	046CH2	.0500	48.0000	26,060	COIL	3143.5	11	1

**CHEMICAL ANALYSIS** CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

HEAT Supplier	CM	C	CR	CU	Ni	Mo	N	NI	P	S
6CH2 6CH2	US	.0210	18.1400	.3840	1.7295	.3195	.0667	8.0550	.0325	.0010
SI										
.2985										

**MECHANICAL PROPERTIES**

Product Id	Supplier Id	1" UTS ksi	.2% YS ksi	ELONG %	Hard RB	Hard RB	Grain No.	TW METALS
046CH2 A	046CH2	94.92	47.12	48.95	85.50	89.00	9.00	TMA49233058 S JUN 4 - 2010 T C. HESS ACCEPTED BY

NAS hereby certifies that the analysis on this certification is correct and the material meets the specifications stated.

QC ENGINEER

ERIC HESS

1/28/2010